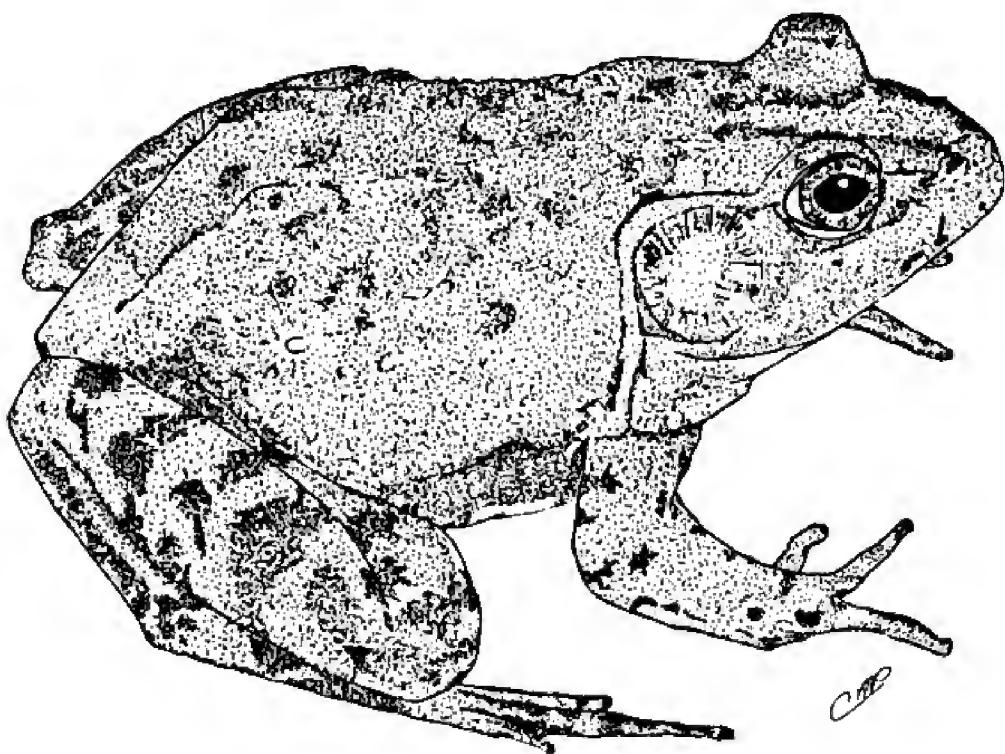


CATESBEIANA



BULLETIN OF THE VIRGINIA HERPETOLOGICAL SOCIETY

ISSN 0892-0761

Volume 30 Spring 2010 Number 1

BULLETIN INFORMATION

Catesbeiana is published twice a year by the Virginia Herpetological Society. Membership is open to all individuals interested in the study of amphibians and reptiles and includes a subscription to *Catesbeiana*, two newsletters, and admission to all meetings. Annual dues for regular membership are \$15.00. Payments received after September 1 of any given year will apply to membership for the following calendar year. See the Web Site (<http://fwie.fw.vt.edu/VHS/>) for a membership application/renewal form.

HERPETOLOGICAL ARTWORK

Herpetological artwork is welcomed for publication in *Catesbeiana*. If the artwork has been published elsewhere, we will need to obtain copyright before it can be used in an issue. We need drawings and encourage members to send us anything appropriate, especially their own work. Digital submissions are preferred.

EDITORIAL POLICY

The principal function of *Catesbeiana* is to publish observations and original research about Virginia herpetology. Rarely will articles be reprinted in *Catesbeiana* after they have been published elsewhere. All correspondence relative to the suitability of manuscripts or other editorial matters should be directed to Dr. Paul Sattler, Editor, *Catesbeiana*, Department of Biology, Liberty University, 1971 University Blvd., Lynchburg, VA 24502 (email: pwsattle@liberty.edu).

Major Papers

Manuscripts for consideration of publication in *Catesbeiana* should be doublespaced and submitted to the Editor electronically. Consult the style of articles in this issue for additional information, including the appropriate format for literature citations. The metric system should be used for reporting all types of measurement data. email attachments in Word format is desired for all papers. Submissions concerning the herpetofauna of selected areas, such as a park, city or county, should be prepared in article rather than field note format. Articles will be refereed by the editor and one or more qualified reviewers. All changes must be approved by the author before publication; therefore, manuscripts must be received by the editor before March 1 and September 1 to be considered for publication in the spring and fall issue, respectively, of *Catesbeiana*. Reprints of articles are not available, but authors may reprint their own articles to meet professional needs.

(Editorial policy continued on inside back cover)

CATESBEIANA

Bulletin of the Virginia Herpetological Society

Volume 30

Spring 2010

No.1

Contents

Observations on the response of four eastern box turtles
(*Terrapene carolina carolina*) to clearcut logging and
chipping in southern Virginia.

Todd S. Fredericksen and Joshua L. Bernard 3

Fifth Annual HerpBlitz - Kiptopeke State Park 10

Smith Mountain Lake State Park Survey:
Scarlet Kingsnake Blitz.

Paul Sattler and Jason D. Gibson 11

Field Notes 23

President's Corner 32

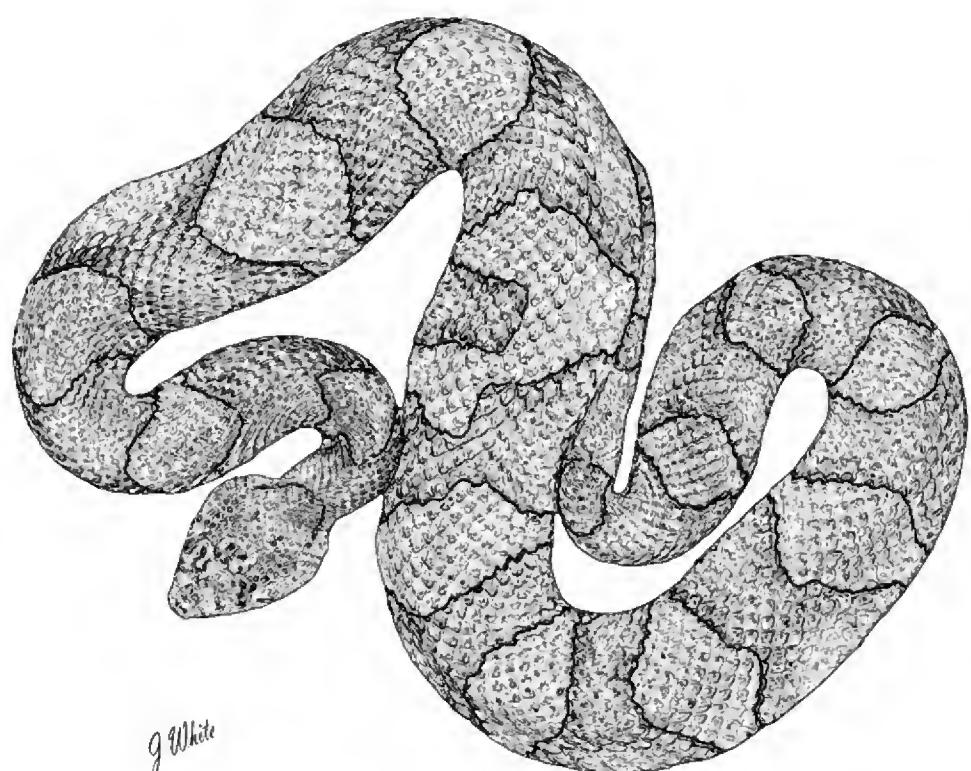
Minutes of the Fall 2009 VHS Meeting 34

Treasurer's Report 39

Spring 2010 Meeting Notice 40

Next Meeting

May 21-23
Mason Neck State Park
Fairfax County, Virginia
See Page 40 for details.



g White

**Observations on the response
of four eastern box turtles (*Terrapene carolina carolina*)
to clearcut logging and chipping in southern Virginia**

Todd S. Fredericksen

Joshua L. Bernard

School of Natural Sciences and Mathematics

Ferrum College

Ferrum, VA 24408

Introduction

The eastern box turtle (*Terrapene carolina carolina* L.) is a common terrestrial turtle (Testudines: Emydidae) found throughout the eastern United States. The species occurs in a wide variety of habitats, but its range closely coincides with that of the eastern deciduous forest (Dodd, 2001). Although considered to be a common species, box turtles are threatened by a suite of factors including habitat destruction and alteration, mortality on roads, pet collection, and environmental contaminants (Dodd, 2001; Budischak et al., 2006). Box turtles are long-lived, but have a very low reproductive potential compared to other reptiles (Klemens, 2000). In one study in Virginia, Wilson and Ernst (2005) found that less than half of adult females were gravid during the breeding season and the mean clutch size per female was 3.15. Young turtles are particularly vulnerable to predation by increasing numbers mesopredators in fragmented landscapes, such as raccoon (*Procyon lotor*), opossum (*Didelphis virginiana*), and striped skunk (*Mephitis mephitis*) (Dodd, 2001).

Since 2005, we have studied the eastern box turtle on the campus of Ferrum College and surrounding sites. We have used radiotelemetry to study its home range and hibernation behavior (Fredericksen et al., 2007; Ellington et al., 2007). We have also compared the occurrence of box turtles on recently logged stands with that of mature forest stands (Fredericksen et al., 2006). Box turtles have relatively small home ranges (1.2-4.7 ha) (Mitchell 1994) and low vagility, making

them vulnerable to disturbances such as logging.

A survey of box turtle abundance in a sample of forest stands in Franklin and Henry Counties in Virginia found, however, that box turtles were equally common on logged and unlogged stands (Fredericksen et al. 2006). Yet, it is uncertain how much mortality occurs to box turtles by logging equipment or tree felling. It is also unclear whether logging disturbance causes turtles to leave their home range or whether sites are recolonized by box turtles following logging.

In 2008, we studied the behavior and fate of four box turtles using radiotelemetry on a tract in Franklin County that was clearcut logged and chipped. Logging began in June and we were able to follow the four turtles through the four-week logging event, as well as for two months following logging.

Methods

The study site was approximately 8 ha in size and located on relatively flat terrain. The site contained commercially mature forest tree species and was dominated by tuliptree (*Liriodendron tulipera*), red maple (*Acer rubrum*), white pine (*Pinus strobus*) and a mixture of oak (*Quercus*) species. Between 29 May and 4 June, we searched the stand and located four mature box turtles. The carapace length of the turtles ranged between 125-140 mm and weight ranged between 340-455 g. We affixed a small radiotransmitter (Model SOPR-2190-MVS, Wildlife Materials, Murphysboro, KY) to the rear right marginal scutes using gel epoxy. We then located each of the turtles every 2-3 days with a TRX 2000 telemetry receiver and antenna (Wildlife Materials, Murphysboro, KY). Turtle locations were recorded using a Garmin GP3 Mapper global positioning system (Garmin Ltd., Olathe, KS). Logging began on 11 June and finished on 10 July. We continued to monitor the movements of turtles during and after logging until late September. We estimated the home range size of turtles using the minimum convex area method.

Box Turtle Response to Timbering

Results

The movements of the box turtles were only monitored a short time before logging and only a few months following logging. The home range estimates of the turtles in this study are thus only approximate. Behavior of the four turtles during the period of logging varied considerably.

Turtle #1 spent nearly the entire period of the study near the riparian area north of the logged area (Figure 1), but was frequently near the boundary of the logging area. This turtle moved frequently, but only for short distances. It moved for a few days into a pasture north of the logged area, but then returned to the riparian area for the remainder of the course of the study. The area of its movement from the beginning of the logging to the end of the monitoring period was approximately 0.5 ha in size.

Turtle #2 was initially within the logged area and was found close to skid trails (Figure 1). Approximately two weeks after the beginning of logging (June 27), turtle #2, the only female of the monitored turtles, moved off of the logged area (presumably to nest) and remained within a hayfield for the next three weeks. This turtle returned to the logged site approximately one week after logging and was found under some remnant slash. It remained under slash for approximately six weeks during a period of very hot and dry weather. In September, the turtle was found active on the surface within the riparian buffer on the north side of the logged area.

Turtle #3 also spent most of its time within the logged area, although its movements were considerably larger, covering approximately 2.5 ha. This turtle was found several times hiding beneath log or brush piles that were about to be moved. This turtle was last found alive on 30 June within a strip yet to be logged. On 3 July, the remains of the turtle were found in the forest adjacent to the logged area. Its carapace was crushed and it appeared to have been run over by logging machinery. The location of the carcass outside of the study area may

have been due to a scavenger, since it was partially eaten.

Turtle #4 moved off of the site and was found on an edge of the forested tract near hay bales. Turtle #4 eventually moved across a field into another forested tract approximately 0.5 km from the logged site. This turtle continued to move further away from the logged area and we removed the transmitter from this turtle approximately one month after logging ceased.

Discussion

As observed with other behavioral patterns in box turtles, such as hibernation and home range size (Ellington et al. 2007, Fredericksen et al., 2007), the response of box turtles in this study varied markedly among individuals. Two of the turtles moved out of the logging area soon after logging began, while two remained on or near the logging site throughout most or all of the period of logging. It is unclear whether the movements of the two turtles which left the logging site were triggered by the logging event. For example, turtle #2 was a female and the timing of her movement coincided with the period of egg laying for this species. It is common for female turtles to seek open areas, such as fields, for egg deposition because these openings provide a more favorable incubation environment (Hall et al., 1999; Dodd, 2001; Wilson and Ernst, 2008). It also appears that sudden unexplained movements are not atypical of box turtles on undisturbed sites. At the same time as this study, we monitored the movements of eight other box turtles on two other mature forest sites within Franklin County. Four of these turtles moved more than 200 m in a short period of time (2-3 days) away from an area where they had been consistently found.

Although turtle #2 left the site during the period of logging, it exhibited a high degree of philopatry by returning to and staying within its home range, which was then largely devoid of vegetation and cover. Unexpectedly, this turtle remained buried under some remnant slash for more than one month under very hot, dry conditions. Box

Box Turtle Response to Timbering

turtles typically avoid open areas under these environmental conditions (Dodd, 2001; Rossell et al., 2006). This turtle only moved twice within this period, and did not leave the clearcut area. Turtles #1 and #3 never moved far from the logged area, despite high levels of noise and habitat disturbance. Cook (2004) found that box turtles imprint on their home range and do not tend to abandon it and, if moved away from a site, they will attempt to return to it.

The tendency to remain on a site that is being logged obviously can have negative consequences for box turtles, as was the case for turtle #3, which was apparently run over by a logging skidder. The likelihood of mortality or negative effects of reduced habitat quality is high on sites such as the one in this study, which was clearcut followed by chipping of most of the logging slash. There are few places on such sites where turtles can seek shelter from logging machinery and falling trees. Turtles are slow-moving and do not burrow into the soil very far during the growing season. Even during hibernation, turtles may not burrow deep enough during mild winters (Ellington et al. 2007) and may possibly sustain injury on sites logged during the winter. The landscape context of a site is also important. Isolated patches of forest which are clearcut would provide no potential for box turtles to adopt a new home range with forest.

In summary, we observed that one out of our four turtles remained in the area during logging operations and was subsequently killed while another one returned to the logged site possibly after laying eggs in an adjacent field. Conclusions could not be drawn about the effects of logging on the movement patterns of the other two turtles.

Acknowledgements:

We thank the Appalachian College Association and Ferrum College Professional Development Fund for financial support of this study. Jim Ebbert and Scott Schallenberger provided us with site data and logistical support. Finally, we thank William and Martha Sue Gibson for the use of their land for this study.

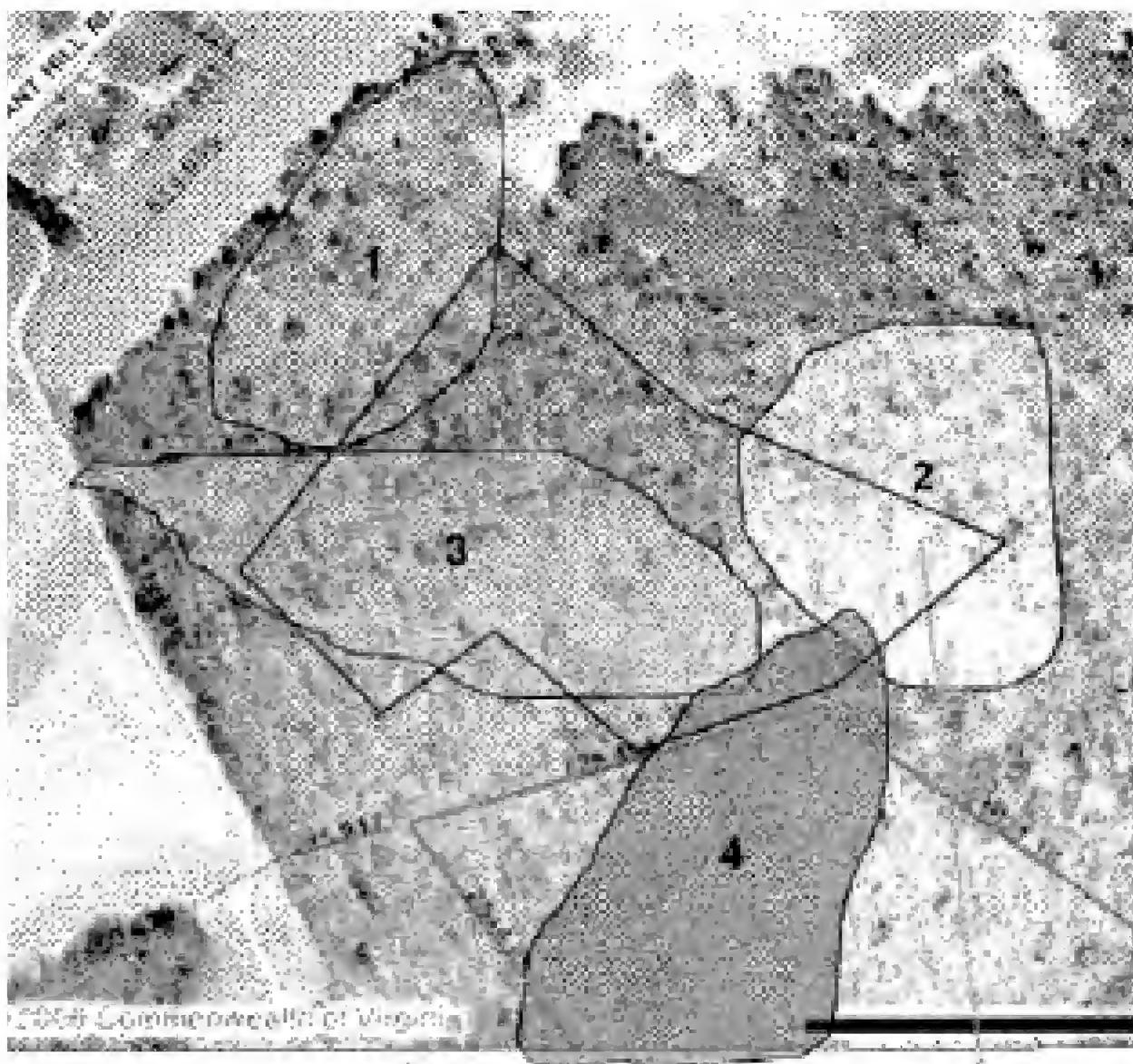


Figure 1. The home range of four box turtles on the study site. The area that was clearcut logged and chipped is approximated by the black polygon. Turtle #1 stayed in or near the riparian buffer indicated by the upper ellipse during the entire study. Turtle #2 left the site during logging, but returned following logging and remained under logging debris for approximately one month in the middle of a period of hot and dry weather. Turtle #3 remained on the site during logging and was killed (presumably by being run over by a skidder) in early July. Turtle #4 left the site during logging (black line) and did not return to the site. Because they travelled long distances from the study area, the home ranges shown for turtles #2 and #4 are larger than the shaded areas in the figure.

Box Turtle Response to Timbering

Literature Cited

Budischak, S.A., J.M. Hester, S.J. Price, and M.E. Dorcas. 2006. Natural history of *Terrapene carolina* (box turtles) in an urbanized landscape. *Southeastern Naturalist* 5:191-204.

Cook, R.P. 2004. Dispersal, home range establishment, survival, and reproduction of translocated eastern box turtles (*Terrapene c. carolina*). *Applied Herp.* 1:197-228.

Dodd, C.K., Jr. 2001. North American Box Turtles: A Natural History. University of Oklahoma Press, Norman, Oklahoma. 231 pp.

Ellington, D., K. Ingram, T. Walker, and T.S. Fredericksen. 2007. Hibernation behavior of the eastern box turtle (*Terrapene carolina*) in the Virginia Piedmont. *Catesbeiana* 27:63-72.

Fredericksen, T.S., K. Graves, and T. Pohlad-Thomas. 2006. Herpetofauna in logged and unlogged forest stands in south-central Virginia. *Catesbeiana* 26:52-63.

Fredericksen, T.S., K. Graves, H.S. Shively, D. Ellington, and T. Walker. 2007. A box full of surprises: the eastern box turtle. *Virginia Wildlife* 68:26-30.

Hall, R.J., P.F.P. Henry, and C.M. Bunck. 1999. Fifty-year trends in a box turtle population in Maryland. *Biological Conservation* 88:165-172.

Klemens, M.W., 2000. *Turtle Conservation*. Smithsonian Institution Press, Washington DC, 334pp.

Rossell, C.R. Jr, I.M. Rossell, and S. Patch. 2006. Microhabitat selection by eastern box turtles (*Terrapene c. carolina*) in a North Carolina mountain wetland. *Journal of Herpetology* 40:280-284.

Wilson, G.L. and C.H. Ernst. 2005. Reproductive ecology of the *Terrapene carolina carolina* (Eastern box turtle) in central Virginia. *Southeastern Naturalist* 4:689-702.

Wilson, G.L., and C.H. Ernst. 2008. Nesting ecology of the Eastern box turtle (*Terrapene carolina carolina*) in central Virginia, USA. *Herpetological Bulletin* 104: 22-32.

Fifth Annual HerpBlitz at Kiptopeke State Park

Date: June 12 & 13, 2010 - Fifth Annual HerpBlitz (Please refer to the VHS website for updates or changes).

Location: Kiptopeke State Park (http://www.dcr.virginia.gov/state_parks/kip.shtml)

This year's HerpBlitz will occur on the Eastern Shore. We hope that you will come out and join us for a multi-day survey of this unique habitat. This is the first time the VHS has visited the Eastern Shore. The main day of the survey will be on June 12 but members are free to gather on June 11 and continue surveying on June 13. We will meet at 8:00 Saturday morning at the parking lot leading to the fishing pier. Please pre-register with Jason Gibson (frogman31@gmail.com) if you plan to attend. This will allow for better coordination and communication if there are any updates or changes.

Accommodations: Camping is available at Kiptopeke State Park. The nearest hotel is sunset beach resort (<http://www.sunsetbeachresortva.com/>). Make sure to make reservations early.

Smith Mountain Lake State Park Survey: Scarlet Kingsnake Blitz

Paul Sattler
Liberty University
Dept. Biology
1971 University Blvd.
Lynchburg, VA 24502
pwsattle@liberty.edu

Jason D. Gibson
Danville City Schools
Galileo Magnet High School
230 South Ridge Street
Danville, VA 24541
frogman31@gmail.com

Introduction

Smith Mountain Lake was created in 1960 when Appalachian Power Company began construction of a dam on the Blackwater and Roanoke Rivers in Smith Mountain Gap in Bedford County to generate electricity. The dam was completed in 1966, and in 1967 Appalachian Power donated the first parcel of land for Smith Mountain Lake State Park. Over the next six years, the state bought the rest of the Park's land. The Park itself opened to the public in 1983. Smith Mountain Lake is the second largest body of freshwater in Virginia being 64 km long and 8335 hectares of surface with 800 km of shoreline. The deepest point in the Lake is about 83 meters near the dam, but the average depth is about 18 meters.

Bourassa State Forest is located in Bedford County just north of Smith Mountain Lake. It is a 117 hectare mixed hardwood forest used for timber production, as an outdoor laboratory, wildlife sanctuary and watershed protection. It was a gift to the state.

Smith Mountain Lake State Park and Bourassa State Forest were surveyed from 12-14 June 2009. The site was selected as a likely area in which to find the Scarlet Kingsnake. Roble et al. (2007) reported on a series of 11 juvenile Scarlet Kingsnakes found between 2003 and 2007 just to the east of Smith Mountain Lake State Park and along a road bordering Bourassa State Forest. The Scarlet Kingsnake was recently upgraded from a subspecies of the Eastern Milksnake

(*Lampropeltis triangulum triangulum*) to full specific status (*Lampropeltis elapsoides*) by Pyron and Burbrink (2009). It is one of the rarest and most elusive of the snakes found in Virginia, with this population possibly representing an isolated endemic population. This was the target species for the survey, however, there are no reports of herpetological surveys conducted for either Smith Mountain Lake State Park or Bourassa State Forest, and so these sites were long overdue for basic surveys.

Study Sites

Smith Mountain Lake State Park was divided into three parts due to it consisting of three peninsulas. Bourassa State Forest was divided into two parts due to there being two parking locations. Each site is briefly described below. The GPS coordinates represent one reading taken at a central point at each location. GPS coordinates were obtained from Google Earth.

Site 1: Campground Peninsula – (37° 5' 8.88"N, 79° 35' 39.69"W) As the site name implies, this peninsula is the location of both cabins and a campground. These areas were off limits to survey but there was plenty of hardwood forest throughout the peninsula. One paved road bisected the peninsula into almost equal halves. This site contains several streams and two vernal ponds (one located near the amphitheater and one across the road from the campground entrance). In the forests there were many piles of rocks and logs.

Site 2: Park Office Peninsula – (37° 5' 33.09"N, 79° 35' 48.18"W) The Park Office Peninsula is divided into two parts by a paved road leading Northwest to Osprey Point. The site contains mixed pine-hardwood forests with beech, maple, and white oak predominating with pines. Midway out, the peninsula is bisected by White Tail Path. The tip of the peninsula contains the swimming beach which was off-limits to our survey. From the Office, Walton Creek Trail runs up the northern shore. It was along this trail that the survey concentrated its efforts. The trail ran close to the shore of Smith Mountain Lake,

Smith Mountain Lake State Park Survey

bisecting many ravines that sloped down to the lake. Only one ravine contained flowing water in an intermittent stream.

Site 3: Visitor Center Peninsula – (37° 5' 10.53"N, 79° 36' 2.92"W)
The Visitor Center Peninsula is divided into two parts by the paved road leading to the visitor center. The site contains mix pine – hardwood forests. The border of the property touches Smith Mountain Lake. One stream is found on the southern portion of this property. Two major hiking trails run the full length of the peninsula and end near the visitor center.

Site 4a: Bourassa State Forest (37° 4' 46.06"N, 79° 31' 22.92"W)
This section of Bourassa State Forest was visited by a small survey group on Friday, 12 June. This portion of the State Forest contains hardwoods with surrounding planted pines. The portion of this site we surveyed did not have any streams or standing water. Tolers Ferry Road borders the property to the north.

Site 4b: Bourassa State Forest (37° 4' 21.11"N, 79° 30' 53.52"W)
The VHS visited this site on 14 June. This portion of the state forest did have a stream which was surrounded by many acres of hardwood forest. Blueberry bushes made up the dominant low ground cover. Tolers Ferry Road borders the property to the northeast and Silver Dollar Lane makes up an eastern boundary. Silver Dollar Lane goes to the highest elevation of the property. At the highest elevation there are many large exposed granitic rocks. Along Silver Dollar Lane there are some debris piles and road rut pools.

Materials and Methods

The Scarlet Kingsnake Blitz began at 1700 hours on 12 June and lasted until 1100 hours 14 June 2009. Groups ranging from 5 to 11 people visited each of the four sites during the survey window (see Table 1). Collecting at each site included visual encounters, road cruising, dipnetting, over turning cover objects, listening for calling anurans, and hand capture. Each animal captured was inspected for

overall health and disease and all observations were documented on data sheets by each team leader. Digital photos and/or digital sound recordings were collected for each species encountered.

Table 1: The amount of survey effort per research site.

	Site 1	Site 2	Site 3	Site 4a	Site 4b
No. Persons	15	11	23	5	8
Hrs surveyed	2.3	2.45	4	1	2
Person hours	34.5	26.95	92	5	16

Results

The Scarlet Kingsnake Blitz survey yielded no captures or sightings of Scarlet Kingsnakes. Despite this disappointment, 26 species of reptiles and amphibians were documented during the weekend (23 species for Smith Mountain Lake State Park and seven species for Bourassa State Forest). Of the 26 species, seven were anurans, seven were salamanders, two were turtles, two were lizards, and eight were snakes. Table 2 summarizes each species and the numbers of animals observed at each survey site. An annotated checklist follows. Numbers in brackets denote the survey sites where each species was documented.

Annotated Checklist

Amphibians

1. *Acris crepitans* (Northern Cricket Frog) –

At least 20 Northern Cricket Frogs were found, but only at a farm pond just outside the park boundaries ($37^{\circ} 6' 14.67''$ N, $79^{\circ} 34' 55.20''$ W). During road cruising on Saturday night, a large chorus of males was heard at this pond.

2. *Anaxyrus americanus* (American Toad) – [1, 2, 4a]

The American Toad was the only toad found during the weekend survey. Two vocalizing males were heard calling after a light rain

Smith Mountain Lake State Park Survey

storm at the vernal pond by the amphitheater at site 1. Two live toads were found in leaf litter and under bark. One DOR toad was found on the road adjacent to site 4a.

Table 2. Summary of the number of animals observed per site.

Sites	1	2	3	4a	4b	Total
Species						
Amphibians						
<i>Acris creptians</i>						
<i>Anaxyrus americanus</i>	2	2		1		5
<i>Hyla versicolor</i>	6					6
<i>Hyla chrysoscelis</i>	6					6
<i>Pseudacris c. crucifer</i>	10					10
<i>Lithobates catesbeianus</i>	7					7
<i>Lithobates clamitans</i>	2		1		2	5
<i>Ambystoma maculatum</i>	5L					5
<i>Ambystoma opacum</i>	1A,3L					4
<i>Desmognathus fucus</i>	3		5			8
<i>Desmognathus monticola</i>		3				3
<i>Eurycea cirrigera</i>	1					1
<i>Hemidactylum scutatum</i>		1				1
<i>Pseudotriton ruber</i>			1A,1L	1		3
Reptiles						
<i>Chelydra serpentina serpentina</i>						
<i>Terrapene c. carolina</i>	10	2	4		2	18
<i>Plestiodon fasciatus</i>	1		1			2
<i>Sceloporus undulatus</i>			2		1	3
<i>Agkistrodon contortrix</i>	1					1
<i>Carphophis amoenus</i>	5	9	2	2	1	19
<i>Coluber constrictor</i>			2			2
<i>Diadophis punctatus</i>	1	3				4
<i>Nerodia sipedon sipedon</i>	1					1
<i>Regina septemvittata</i>			1			1
<i>Pantherophis alleghaniensis</i>	1	1	1			3
<i>Virginia valeriae</i>					1	1
Total Number of animals by site	66	21	21	4	7	119

3. *Hyla chrysoscelis* (Cope's Gray Treefrog) – [1]

Many males were heard vocalizing on Friday night at both vernal ponds at site 1. One Treefrog was observed being eaten by a Black Rat蛇 at the campground vernal pond on Friday night. Two Treefrog egg masses were found floating on the surface of the campground vernal pond on Saturday.

4. *Hyla versicolor* (Common Gray Treefrog) – [1]

The campground and amphitheater vernal ponds yielded many observations of calling Common Gray Treefrogs on Friday night. Two males were heard calling at the amphitheater vernal pond on Friday night.

5. *Lithobates catesbeianus* (American Bullfrog) – [1]

During night searches of the two vernal ponds on site 1, five juvenile and two young adult American Bullfrogs were found.

6. *Lithobates clamitans* (Green Frog) – [1, 3, 4b]

Green Frogs were observed at vernal ponds, by the edge of streams, swimming in a stream, and in road rut puddles.

7. *Pseudacris crucifer crucifer* (Northern Spring Peeper) – [1]

On Friday night a large chorus of Northern Spring Peepers was vocalizing at the amphitheater vernal pond.

8. *Ambystoma opacum* (Marbled Salamander) – [1]

Marbled Salamander larvae were dipnetted at both vernal ponds. One metamorph was found at the edge of the amphitheater vernal pond.

9. *Ambystoma maculatum* (Spotted Salamander) – [1]

Only larvae of *Ambystoma maculatum* were found at both vernal ponds during the survey period.

10. *Desmognathus fuscus* (Northern Dusky Salamander) – [1,3]

Northern Dusky Salamanders were found at sites 1 and 3. Salamanders were found under rocks by streams, at the edge of streams, swim-

Smith Mountain Lake State Park Survey

ming in a stream and at the base of a culvert pipe. One gravid female was found to be parasitized by an intradermal trombiculid mite larvae on a hind foot.

11. *Desmognathus monticola* (Seal Salamander) – [2]

Seal Salamanders were only found at site 2. All were discovered under rocks by a stream. One 65 cm SVL adult was found dead in a stream.

12. *Eurycea cirrigera* (Two-lined Salamander) – [1]

Only one Two-lined Salamander was found under a rock by the edge of a stream at site 1.

13. *Hemidactylum scutatum* (Four-toed Salamander) – [2]

A Four-toed Salamander was found under the leaf litter under a log. Club moss was the dominant vegetation at the site of capture.

14. *Pseudotriton ruber* (Red Salamander) – [3, 4a]

One adult Red Salamander was found under a small log at site 3 and one larva was dipnetted in a stream at site 3.

Reptiles

15. *Chelydra serpentina serpentina* (Eastern Snapping Turtle)

No snapping turtles were found inside the boundaries of the state park or state forest. Two DOR turtles were found on 12 and 14 June just outside the park entrance. Two large farm ponds are adjacent to the road where these turtles were observed.

16. *Terrapene carolina carolina* (Eastern Box Turtle) – [1,2,3,4b]

Eastern Box Turtles were the most commonly found turtle species during the survey period. A total of 18 live turtles (11 males, 5 females, and 2 not sexed) and five dried shells were found. Box turtles were found in dry ravine streambeds, on dirt roads, foraging in leaf litter, soaking in stream water, and one was found in a form at the base of a tree.

17. *Plestiodon fasciatus* (Five-lined Skink) – [1,3]

Five-lined Skinks were found in a tree and under debris in a trash pile near the maintenance area.

18. *Sceloporus undulatus* (Fence Lizard) – [3, 4b]

Fence lizards were found basking on logs and rocks on Saturday and Sunday. Two males and one unsexed lizard were observed.

19. *Agkistrodon contortrix mokasen* (Northern Copperhead) – [1]

Under a rock in a rock pile at site 1, a juvenile Northern Copperhead was uncovered. This animal was at least a year old and still had remnants of the sulfur colored tail.

20. *Carphophis amoenus amoenus* (Eastern Wormsnake) – [1,2,3,4a,4b]

Carphophis amoenus was the most commonly found snake species during the survey. Snakes were found at the base of old standing stumps, in logs, under logs, under mats of moss, and under debris piles.

21. *Coluber constrictor constrictor* (Northern Black Racer) – [3]

Two racers were hand captured (112 cm TL and 125 cm TL) at site 3. One was basking by a tree and the other was found at the interface of the tree line with the road.

22. *Diadophis punctatus* (Ring-necked Snake) – [1,2]

Four Ring-necked Snakes were collected in logs, and under logs on Saturday. Each animal had full neck rings and no spots on the ventrum. One DOR adult snakes was found on the road leading to the campground. It had a full neck band and a few spots on the ventrum.

23. *Nerodia sipedon sipedon* (Northern Watersnake) – [1]

One juvenile Northern Watersnake was hand captured at the edge of a stream at site 1. Several other snakes were seen dropping from overhanging branches into the stream and could have been either *Nerodia*

Smith Mountain Lake State Park Survey

sipedon or *Regina septemvittata*.

24. *Regina septemvittata* (Queen Snake) – [3]

A juvenile *Regina septemvittata* was hand captured while it was swimming in a stream at site 3.

25. *Pantherophis alleghaniensis* (Eastern Ratsnake) – [1,2,3]

Two Eastern Ratsnakes were found on Friday night. One was collected AOR near the park office, the other was observed eating a *Hyla* sp. (grey treefrog) by the campground vernal pond. A 173 cm ratsnake was treed by survey members at site 3 on Saturday.

26. *Virginia valeriae* (Smooth Earth Snake) – [4b]

One adult Smooth Earth Snake was observed DOR on Tolers Ferry Road near the entrance to state forest property.

Discussion

Of the 14 amphibian and 12 reptile species found on the Scarlet Kingsnake Blitz, virtually all are widely distributed species with a distribution that is either statewide or nearly so. This would include all the species found except *Acris crepitans* where Bedford County is on the western edge of the range, *Hyla chrysoscelis* which is mostly distributed in the Coastal Plain and far southwestern Virginia with only a sparse Piedmont presence, *Hyla versicolor* which is prevalent only in the Piedmont, and *Desmognathus monticola*, prevalent in the Piedmont and western Blue Ridge, Valley and Ridge, and Cumberland Plateau Physiographic Provinces.

Of the 26 species recorded, several are possibly new county records. *Hyla chrysoscelis* and *Ambystoma opacum* are not listed for Bedford County in the Virginia Department of Game and Inland Fisheries' database, and are not recorded for Bedford either in Toby (1985) or Mitchell and Reay (1999), although both are recorded just to the south in Pittsylvania County. *Hyla chrysoscelis* probably has a wider Piedmont distribution than has been previously recognized, and it

would be helpful for researchers to pay closer attention to gray tree-frog calls in the breeding season to better delineate this species' range, especially in the Piedmont. *Ambystoma opacum* is found throughout Virginia and its presence in Bedford Count is not surprising. Like most mole salamanders of the genus *Ambystoma*, they can be difficult to find outside of the short breeding season. Their prior absence from the fauna of Bedford County most likely represents a lack of careful surveys during the fall breeding season, and a failure to find the larvae in the early spring.

Both species of gray treefrog were calling at the same time and the same vernal pool at the Park. *Hyla versicolor* is not listed in the VDGIF database, but is found for Bedford County in both Toby (1985) and Mitchell and Reay (1999). *Virginia valeriae* is not listed for Bedford County in the VDGIF database, Toby (1985) or Mitchell and Reay (1999) but is in Linzey and Clifford (1981). Roble et al. (2007) mention that *Virginia valeriae* was found on Co. Rt. 608 during their searches for *Lampropeltis elapsoides* but no vouchers were apparently collected. Thus, it appears that two new county records came from this survey, that for *Hyla chrysoscelis* and *Ambystoma opacum*. Digital recordings of the calls of *Hyla chrysoscelis* and *H. versicolor* were deposited in the VHS digital archive (#126 & 127) as were photographs of a newly metamorphed *Ambystoma opacum* (#135-136).

There are a large number of species either widespread in Virginia or specifically the Piedmont, which were not found but expected during this survey. These species include: *Lithobates palustris*, *Lithobates sylvatica*, *Eurycea guttolineata*, *Plethodon cinereus*, *Plethodon cylindraceous*, *Chrysemys picta*, *Sternotherus odoratus*, *Plestiodon laticeps*, *Crotalus horridus*, *Pantherophis guttatus*, *Heterodon platynotus*, *Opheodrys aestivus*, and *Thamnophis sirtalis*. Many of these species are undoubtedly present, but just not encountered during this short survey. For example, Park staff reported that *Crotalus horridus* had been seen in the Park previously as road killed specimens. Bedford County occurs on the eastern or western edge of the

Smith Mountain Lake State Park Survey

range of several species, including: *Pseudacris feriarum*, *Gyrinophilus porphyriticus*, *Kinosternon subrubrum*, *Lampropeltis calligaster*, *Lampropeltis getula*, *Lampropeltis triangulum*, *Storeria dekayi*, and *Storeria occipitomaculata* making it likely they also would occur in Smith Mountain Lake State Park. Finally, *Pseudemys concinna* has a sparse distribution in the Piedmont, but appears to be much more prevalent than current range maps would indicate. The River Cooter is likely to occur in the Roanoke River. However, because Smith Mountain Lake was formed by damming rivers in steep valleys, the shoreline recedes quickly, making the placement of turtle traps difficult. Many of the turtles thought likely to occur in the Lake could perhaps be verified if hoop traps could be employed.

The major activities and emphasis for this Park all revolve around water recreation sports. Boating, fishing and swimming are the major activities enjoyed. There is a Nature Program offered, but most events seem poorly attended. The Life of the Park appears to revolve around the Lake and the water activities it presents. For the number of trails available, there seemed to be few people enjoying them and the wildlife associated with the outdoors. We hope this work may encourage others to explore the natural beauty of the Park and the wildlife it harbors.

Literature Cited

Linzey, D.W. and M.J. Clifford. 1981. Snakes of Virginia. University Press of Virginia, Charlottesville, VA. 159pp.

Mitchell, J.C., and K.K. Reay. 1999. Atlas of Amphibians and Reptiles in Virginia. Special Publication Number 1, Virginia Department of Game and Inland Fisheries, Richmond, VA. 122pp.

Pyron, R.A. and F.T. Burbrink. 2009. Neogene diversification and taxonomic stability in the snake tribe Lampropeltini (Serpentes: Colubridae). *Molecular Phylogenetics and Evolution* 52:524-529.

Roble, S.M., G.N. Woodie, and M.D. Kinsler. 2007. Discovery of a population of Scarlet Kingsnakes (*Lampropeltis triangulum elapoides*) in the Virginia Piedmont. *Catesbeiana* 27(2):84-94.

Toby F.J. 1985. Virginia's Amphibians and Reptiles: A Distributional Survey. Virginia Herpetological Survey, Purcellville, VA. 114 pp.

Acknowledgments:

Craig Abbott, Scott and Sophie Duncan, Jason and Mark Gibson, Kyle Harris, Brian and Mitchell Kim, David and Jennifer Kiser, Michael and Nancy Pearcy, Paul and Nancy Sattler, Gene and Katherine Sattler, Kory and Emily Steele, David and Wes Van Gelder, John, Amy and Cherise White, Gordon Wilson, and Dennis Woodson all helped collect data for this survey. Special thanks to Lauri Schular for help in organizing survey locations.

Field Notes

***Pseudotriton ruber* (Red Salamander).** VA: Buckingham Co., Kennedy Tree Farm, 6.7 km north of Dillwyn on Rte 15. 8 June 2008. Erica M. Rutherford.

County Record: An adult *Pseudotriton ruber* was found under a cinder block in a hardwood-pine-lawn mosaic habitat, surrounded by a hybrid loblolly pine plantation. Nearby were two manmade ponds. The identification was verified by Donald A. Merkle. This is the first documented specimen of *P. ruber* in Buckingham County, although several more were found nearby shortly thereafter (Akre et al. unpubl. data). This specimen was found approximately 21 km from the nearest record, in Fluvanna County (J.C. Mitchell and K.K. Reay. 1999. Atlas of Amphibians & Reptiles in Virginia. Special Publication Number 1, Virginia Department of Game and Inland Fisheries, Richmond, VA. 122 pp.; USGS National Amphibian Atlas. 2008. Version Number 1.1, USGS Patuxent Wildlife Research Center, Laurel, Maryland. www.pwrc.usgs.gov/naa). The majority of Virginia records for *P. ruber* are from the Ridge and Valley and the Blue Ridge, with some records in the Coastal Plain where it overlaps in part with the mud salamander (*P. montanus*). This observation fills a gap in the Piedmont, where records for this species are relatively scattered and more locality data are needed to clarify the range boundaries of each species. A digital photograph of the salamander was deposited in the VHS archives (VHS Archive #156).

Erica M. Rutherford and Thomas S. Akre

Department of Biological and Environmental Sciences
Longwood University
Farmville, VA 23909

***Siren i. intermedia* (Eastern Lesser Siren):** VA: Hanover Co., 1.5 km SW Rural Point, Richmond National Battlefield Park. 11-12 August 2009. Donald G. Mackler.

County Record: Two adult Eastern Lesser Sirens were retrieved 11

August 2009 from an unbaited galvanized mesh Gee Crayfish Trap (42 cm long and 23 cm wide with a 57 mm entrance hole) that had been set 21 hours previously in a small pond associated with Totop-otomoy Creek in Hanover County, Virginia. The author and Zachary B. Moore photographed and measured both, and detailed descriptions were noted. Elevation of the pond is 36 to 46 meters. Water depth was 1.5-2 m. A third individual of this species was retrieved the next morning in an identical trap set about 16 m from the first. Lack of juvenile characteristics, and costal groove counts (from the armpit to the anus) ranging from 32 to 34, separated this subspecies from the most similar local species (*Siren lacertina*). Verification of the species was requested via e-mail from Dr. Joseph Mitchell who confirmed our identification on 20 August. Digital images were submitted to the VHS Digital Archive (#146).

This occurrence establishes a new county record for this subspecies (Mitchell, J.C. and K.K. Reay. 1999. Atlas of Amphibians and Reptiles in Virginia. Special Publication Number 1. Virginia Department of Game and Inland Fisheries, Richmond, VA 122 pp.; and Va. Dept. Game and Inland Fisheries, "County occurrence maps chapter for *Siren, lesser* (020082)," 23 April 2004). The subspecies has previously been listed as occurring in Caroline, King William and New Kent counties, which border Hanover County on the northeast and southeast, but in no other counties adjacent to Hanover (Va. Dept. Game and Inland Fisheries, 2004 Information Services Database).

This discovery is part of an ongoing inventory of amphibians, reptiles, and birds of newly acquired lands for the Richmond National Battle-field Park under the supervision of Dr. J. Edward Gates, University of Maryland Center for Environmental Science. I thank Kristen Allen, Natural Resource Management Specialist (RICH), for facilitating our fieldwork and the National Park Service Northeast Region for support.

Donald G. Mackler

214 Prospect St.
Blacksburg, VA 24061

Field Notes

Storeria dekayi dekayi (Northern Brown Snake). VA:Pulaski Co, town of Pulaski, Cox Hollow Road. 18 April 2009. Joshua B. Palmer

On 18 April 2009 around 1700h (air temperature 18.3C), I was driving on Cox Hollow Road and spotted several small, road-kill snakes. I stopped and got out of the car for a positive identification. All were small brown snakes *Storeria dekayi*. I collected five dead specimens and one live specimen. The largest of the specimens was approximately 29.21 cm total length. The live specimen was 25.4 cm. total length. The five dead snakes were preserved in 70% ethyl alcohol while the live brown snake was maintained live and released one week later at the site of collection after digital photographs had been taken.

The habitat along the side of the road is varied. On one side is a steep shale/clay bank with sparse vegetation. At the top of that bank it is a mixed hardwood forest consisting of white oak (*Quercus alba*) and various hickory species (*Caraya* ssp.). On the other side of the road is a field with a small stream running close to the road. This eventually turns into a wooded area with Yellow poplar (*Liriodendron tulipifera*), black birch (*Betula lenta*), and smooth alder (*Alnus serrulata*) among other species. There are several homes alongside the road as well, all with wooded yards.

This is a new record for *Storeria d. dekayi* in Pulaski County. (Tobey, F.J.. 1985. Virginia's Amphibians and Reptiles: A Distributional Survey. Virginia Herpetological Society, Purcellville, VA. 114 pp; Mitchell, J.C. and K.K. Reay. 1999. Atlas of Amphibians and Reptiles of Virginia. Virginia Department of Game and Inland Fisheries, Special Publication No. 1, Richmond, VA. 122 pp; Garrioch and Reynolds. 2005. Results of a herpetofaunal survey of the Radford Ammunition Plant in southwestern Virginia. *Banisteria* 25: 3-22). Digital photos were submitted to the VHS archives (#160).

Joshua B. Palmer
5668 Old Route 11
Dublin, Virginia 24084

***Lampropeltis calligaster rhombomaculata* (Mole Kingsnake).** Va: Franklin Co., Intersection of Copperhead Ln. and Mt. Carmel Rd. (36°52'44.58"N, 79°44'44.15"W). 19 September 2009. Mike Rogers and Larry Turner.

County Record: On 19 September 2009 MR and LT found a DOR Mole Kingsnake on Copperhead Lane near its intersection with Mt. Carmel Road. Copperhead Lane is a gravel road surrounded by an agricultural field on one side and mature hardwood forest on the other. The snake was killed between 0915 hours and 1200 hours. Upon finding this animal, LT took a digital photograph and brought the camera back to JG and PS for identification. This species has not been reported for Franklin County in Mitchell and Reay (1999. *Atlas of Amphibians and Reptiles in Virginia*. Special Publication Number 1, Virginia Department of Game and Inland Fisheries, Richmond, VA, 122 pp.), Mitchell (1994. *The Reptiles of Virginia*. Smithsonian Institution Press, Washington DC. 352 pp.), Tobey (1985. *Virginia's Amphibians and Reptiles: A Distributional Survey*. Virginia Herpetological Society, Purcellville, VA. 114 pp.) or the Virginia Department of Game and Inland Fisheries wildlife database. Linzey and Clifford (1981. *Snakes of Virginia*. University Press of Virginia, Charlottesville, VA. 173pp.) report this snake in Franklin County. Linzey and Clifford have reports not listed in the other four sources previously cited. Perhaps this observation represents the first vouchered occurrence in Franklin County or the second reported. A digital image is deposited in the VHS digital archives (Digital voucher #152).

Jason D. Gibson
Galileo Magnet High School
230 South Ridge Street
Danville, Virginia 24541

Paul Sattler
Liberty University
Department of Biology/Chemistry
1971 University Blvd.
Lynchburg, VA 24502

Field Notes

Thamnophis sirtalis (Eastern Gartersnake) VA: Franklin Co., Chestnut Mountain (36° 53' 37.30" N, 79° 45' 16.83" W) 19 September 2009. Paul Sattler and Jason Gibson.

County Record: On 19 September 2009 we were invited to Franklin County to a residence where Timber Rattlesnakes had been reported, to make a search for additional specimens. While that search was fruitless, we did observe and photograph several species not previously reported from Franklin County. This included an adult Eastern Gartersnake. Gartersnakes have a state wide distribution (Mitchell, J.C. 1994. The Reptiles of Virginia. Smithsonian Institution Press, Washington DC. 352 pp.) so it is not unusual to find them in Franklin County. They have been documented in every county bordering on Franklin. However, while Linzey and Clifford (1981. Snakes of Virginia. University Press of Virginia, Charlottesville, VA 159 pp.) reported Gartersnake presence in Franklin County, Tobey (1985. Virginia's Amphibians and Reptiles: A Distributional Survey. VHS, Purcellville, VA 114 pp.), Mitchell and Reay (1999. Atlas of Amphibians and Reptiles in Virginia. Special Publ. Number 1, Virginia Department of Game and Inland Fisheries, Richmond, VA. 122 pp.), Mitchell (ibid 1994), and the Virginia Fish and Wildlife Information Service Database, do not. This is most likely a consequence of few previous herpetological surveys being conducted in Franklin County. Two digital images were deposited in the VHS Digital Archive (# 153 and 154) as vouchers.

Paul Sattler

Department of Biology
Liberty University
1971 University Blvd.
Lynchburg, VA 24502

Jason D. Gibson

Galileo Magnet High School
230 South Ridge Street
Danville, VA 24541

***Hyla cinerea* (Green Treefrog)** VA: Southampton Co., Rt. 611 at Joyner's Bridge (36 44.024N, 76 55.473 W); and Rt. 638 (Drake Road) 1.6 km south of Rt. 640 (36 44.284 N, 76 57.590 W) 6 May 2009. Brian Munford.

County Record: On 6 May 2009, Green Treefrog choruses were recorded on Routes 611 and 640 along the Cypress Swamp drainage in Southampton County. Green Treefrogs are not listed for Southampton County by Mitchell and Reay (1999. *Atlas of Amphibians and Reptiles in Virginia*, Special Publ. No. 1, Virginia Department of Game and Inland Fisheries, Richmond VA, 122 pp.), Tobey (1985. *Virginia's Amphibians and Reptiles, a Distributional Survey*. Virginia Herpetological Society, Purcellville, VA. 114 pp), or in the Virginia Department of Game and Inland Fisheries Wildlife Information Service Database. While Green Treefrogs are reported for Suffolk and Isle of Wight Counties to the east and Greensville County to the west, and reported by both Roble et al. (2005. Opportunistic surveys for the Oak Toad (*Bufo quercicus*) in Southeastern Virginia: on the Trail of Leslie Burger. *Catesbeiana* 25(1): 3-23.) and Sattler and Gibson (2007. Opportunistic Anuran surveys in Southeastern Virginia: Looking for Oak Toads, but finding...Spadefoots! *Catesbeiana* 27(1): 3-14.) neither of these references collected vouchers. The two digital recordings deposited in the VHS Archive (# 149 and 150) support these earlier records and represent the first voucher for Southampton County.

Brian Munford
4021 Northrop Street
Richmond, VA, 23225

***Lithobates clamitans* (Green Frog)** VA: Southampton Co., in a pond 0.33 km. south of Rt. 687 (36 38.200 N, 76 59.165 W). 3 July 2008. Brian Munford.

County Record: On 3 July 2008 a small chorus of Green Frogs was recorded as part of a North American Amphibian Monitoring Project survey (Isle of Wight #881123). This observation is a new county

Field Notes

record and fills a hiatus in the distribution since it is recorded from every surrounding county (Virginia Department of Game and Inland Fisheries Wildlife Information Service Database). Roble et al. (2005. Opportunistic surveys for the Oak Toad (*Bufo quercicus*) in South-eastern Virginia: on the Trail of Leslie Burger. *Catesbeiana* 25(1): 3-23.) reported that Mitchell and Reay (1999. *Atlas of Amphibians and Reptiles in Virginia*, Special Publ. No. 1, Virginia Department of Game and Inland Fisheries, Richmond VA, 122 pp.) lacked records of *Lithobates clamitans* for Southampton County, and themselves reported two records for the county, but did not have vouchers. The Digital recording deposited in the VHS Archive (# 148) fills this void.

Brian Munford
4021 Northrop Street
Richmond, VA, 23225

Pseudacris ocularis (Little Grass Frog) VA: Isle of Wight Co., Rt. 630 2.5 km west of US 258 (36 43.318N, 76 54.536 W). 6 May 2009. Brian Munford.

County Record: On 6 May 2009, a small chorus of Little Grass Frogs was recorded in the ditches along Rt. 630 as part of a North American Amphibian Monitoring Program survey. This observation is a new county record and fills a hiatus in the distribution of this species which is recorded from Southampton and Surry Counties to the west and north, and Suffolk City to the east (Mitchell J.C. and K.K. Reay, 1999. *Atlas of Amphibians and Reptiles in Virginia*, Special Publ. No. 1, Virginia Department of Game and Inland Fisheries, Richmond VA, 122 pp.; Tobey, F. J. 1985. *Virginia's Amphibians and Reptiles, a Distributional Survey*. Virginia Herpetological Society, Purcellville, VA. 114 pp). A digital recording of the chorus has been deposited in the VHS Digital Archive (# 151).

Brian Munford
4021 Northrop Street
Richmond, VA, 23225

Lithobates sphenocephalus (Southern Leopard Frog). VA: Pennsylvania Co., White Oak Mountain Wildlife Management Area.
3 October 2009. Jason Gibson, Paul Sattler, and Grant Gibson.

Reproduction: The Southern Leopard frog is one of six lithobatid frog species which inhabit Virginia. It has a southern biogeographical orientation and is uncommon in Piedmont counties (Mitchell, J.C. and K.K. Reay. 1999. *Atlas of Amphibians and Reptiles in Virginia*. Virginia Department of Game and Inland Fisheries, Special Publication No. 1, Richmond, Virginia. 122pp.). This species is a prolific breeder; females can lay spherical masses which contain between 1,000 and 1,500 eggs (Dorcas, M, and W. Gibbons. 2008. *Frogs and Toads of the Southeast*. The University of Georgia Press, Athens, Georgia. 238pp.). Roble (2003. Field Notes: *Rana sphenocephala*. *Catesbeiana* 23: 21-24) has published an excellent account summarizing the known literature in Virginia on the breeding dates for this species. The Southern Leopard Frog has been documented to breed in two distinct time periods; Spring: 22 February through 15 April, and Fall: 1 September through 16 October (Roble, op. cit.). This is essentially a late winter early spring event and an early autumn event. Data we have collected from 2007 to the present indicates that the breeding season for the Southern Leopard Frog extends from 7 March to 26 April at White Oak Mountain Wildlife Management Area. Calling males have been documented from 7 March to 26 April and egg laying has been documented from 8 March to 18 April.

The latest egg laying date published for this species in Virginia is 16 October and this observation was of a single egg mass (Roble, op. cit). Communal egg laying is common in the spring, but in autumn it has not been documented in previously published accounts for Virginia. Roble (op.cit) suggested that isolated egg laying was more common in the fall from his observations. On 3 October 2009, we surveyed a common vernal pond at White Oak Mountain Wildlife Management Area and discovered to our amazement a fall breeding bout of the Southern Leopard Frog. Our observation included a count of 61 egg

Field Notes

masses all in one small vernal pond. All of the masses were deposited near the surface and most were attached to the stems of needle rushes (*Juncus* sp.). Most of the egg masses were clustered together, with only a few laid singly. Three of the egg masses had embryos in Gosner stage 18 (Gosner, K.L. 1960. A simplified table for staging anuran embryos and larvae with notes on identification. *Herpetologica* 16: 183-190.). These embryos were still in egg capsules. Fifty eight eggs masses were in Gosner stage 19 and had hatched, but were still attached to the egg mass jelly. One egg mass was disturbed while photographing it, and the embryos that were disturbed and separated from the egg mass swam back to it. We speculate that these egg masses were one week old. A very strong rain storm visited the area the previous Saturday on 26 September 2009. To our knowledge this is the first published account for this species depositing their eggs communally during the fall breeding season in Virginia. At White Oak Mountain Wildlife Management Area we have discovered Southern Leopard Frog egg masses deposited in small streams, fishing ponds, marshy areas, and vernal ponds. Vernal areas seem to have the highest concentration of masses. We have found other frog species to breed in the same pond including: *Acris crepitans*, *Anaxyrus americanus*, *Anaxyrus fowleri*, *Gastrophryne carolinensis*, *Hyla chrysoscelis*, *Hyla versicolor*, *Pseudacris crucifer*, *Pseudacris feriarum*, *Lithobates caesbeianus*, *Lithobates clamitans*, and *Lithobates palustris*. Four salamander species also use this pond for breeding as well. These include *Ambystoma maculatum*, *Ambystoma opacum*, *Ambystoma talpoideum*, and *Notophthalmus viridescens*.

Jason D. Gibson

Galileo Magnet High School
230 South Ridge Street
Danville, Virginia 24541

Paul Sattler

Liberty University
Department of Biology/Chemistry
1971 University Blvd.
Lynchburg, Virginia 24502

President's Corner

As the new president for the VHS, the last six months since I was elected in October, at the fall meeting at Three Lakes Nature Center, have been very busy. Actually, the newly elected vice president, Larry Mendoza, and I have been working for several months before then to come up with ideas on how we would like to change and make improvements in the VHS. Admittedly, most of the proposed changes involve behind the scenes and bookkeeping type tasks that will hopefully benefit future VHS members.

The biggest priority for Larry and I during our term is to change the VHS over to a nonprofit organization, add more members, and generate more income to be used for conservation, education, and research on Virginia's native herps. To our advantage, past president Susan Watson submitted the nonprofit application. On March 1, 2010, we were notified by the IRS that we were officially a 501(c)(3) nonprofit organization. From now on, all membership dues and donations are tax deductible!

The immediate benefit to becoming nonprofit is reinstating the PayPal option for memberships and events on our website. In the near future, we will have the ability to take in registration fees for the fall meeting, all types of memberships, and a dedicated "donate" button electronically.

Some of the ways that we use the funds that we collect go towards supporting scientific research. We recently gave Eric Liebgold, a PhD student at UVA, a \$500 grant for his work on "The effects of genetic heterozygosity on territory size in the terrestrial salamander, *Plethodon cinereus*". In addition to our annual \$500 grant, we are pleased to announce that we are also offering a matching grant to the Virginia Department of Game and Inland Fisheries \$500 grant (for a total of \$1000) for research being conducted on species listed in the Wildlife Action Plan. More details will be posted on the website.

We have a lot of ambitious goals for the VHS, and they may take a full term (or more) to implement. We are hoping to dramatically

President's Corner

improve the benefits to our members and give you a reason to stay a member every year. However, we will continue to depend on our mainstays for membership involvement in the VHS, such as our field surveys. Two out of the three surveys scheduled for this year (in Fairfax County and on the Eastern Shore) take the VHS to areas of Virginia that haven't been surveyed by us either for the first time in more than a decade, or for the first time ever. Another survey at the newly created Powhatan State Park provides VHS members with exclusive access to herping habitats that are off-limits to almost anyone else. Details of the surveys can be found on our website.

I am very much looking forward to my time as president of the VHS, and I encourage our members to attend one of our events. No experience is necessary, but we can also challenge the experts. Please feel free to contact me with any questions or suggestions for the VHS.

Kory Steele
VHS President
colchicine@gmail.com
vaherpssociety.com

Minutes of Fall 2009 Meeting

Virginia Herpetological Society
Minutes of Fall Meeting
Three Lakes Nature Center and Aquarium
400 Sausiluta Drive
Richmond, VA 23227
October 24, 2009

The Fall Meeting was called to order by our president, Susan Watson, around 4:30pm. No old business was in need of discussion. The meeting was then turned over to our committee chairs for reports.

Treasurer and Cafe Press: Pattie Crane was unable to attend the business meeting, therefore a report was not given. See *Catesbeiana* for the corresponding reports.

Conservation Committee: Tim Christensen was unable to attend the business meeting, but the following report was made available:

1. The Conservation Committee currently includes the following members: Tim Christensen, David McCarthy, and Todd Fredericksen.
2. The Conservation Committee presents the following tasks and statuses:

“Conservation of Reptiles and Amphibians in Virginia” presentation (originally Task #3).

- (1) The Presentation is now finished.
- (2) Committee members are finishing the design for a 4-hour workshop intended for and offered to certified Virginia Master Naturalists. The workshop is intended as a Train the Trainer forum so that VMNS can use the presentation for various audiences to help promote conservation of reptiles and amphibians across Virginia. We are woefully behind in getting this accomplished and have reset the goal to complete and then offer the workshop for the spring and summer. Targeted audiences/events include (but are not limited to) school teachers, Cooperative Extensions, Reptile Weekend @ VLM, VDGIF’ Outdoor Education Program, corporate landowners, homeowner associations, 4-H, Boy/Girl Scouts and neighborhoods. Tim would like to give the presentation during Reptile Weekend in 2010.
- (3) Christopher Wren Association (CWA). There’s an potential op-

Minutes of Fall 2009 Meeting

portunity to advance the awareness of reptiles and amphibians to the public through the CWA sponsored by the College of William and Mary in Williamsburg. This Association is dedicated to continuing learning for individuals purely interested in learning (there are no tests or coursework outside the classes). Courses offered are quite varied and include history, photography and science. CWA was contacted with the proposal of a course along the lines of "Reptiles and Amphibians of Southeast Virginia" having been submitted. We are awaiting a response. Conservation would be included as a topic.

(4) WildlifeMapping. The Virginia Dept of Game and Inland Fisheries could use more herp observations in its database. We should continue to promote this program to our membership.

(5) Threats to Herpetofauna Poster. The Committee proposed designing charts/posters that illustrate threats to herpetofauna. The suggestion is to have separate materials for anurans or amphibians as one group and one for turtles & snakes or reptiles as another group. This could potentially be made available for sale through the VHS Store, provided to schools, etc. Proceeds could go towards specific conservation-related projects. No further action has taken place since its proposal due to time, however, this will be revisited once the #1 task above is complete.

(6) Herp Stamp. Just a reminder, we should revisit this once we attain nonprofit status.

(7) Federal Duck Stamp Promotion. This was promoted previously and we have information about it on the website. Recommend we push on this again and possibly have a list of names on the website with the number individuals purchase. Could we possibly have a prize to the individual who purchases the most in each year or every 2 years? Remember, ninety-eight cents of every dollar generated by the sale of Federal Duck Stamps goes toward purchase or lease of wetlands within the National Wildlife Refuge System. This supports efforts towards habitat protection for herps.

3. The Committee continues to solicit more members.

Newsletter editor and Yahoo Groups: Kory Steele reports problems with sending the newsletter via email out to our members. Often

servers will reject the email and send it to spam or deny it due to a mass mailing list. This creates a problem in getting in touch with our members. We need to encourage our members to set their email filters appropriately.

Research committee: Joy Ware reports that the research committee has continued working on a basic disease/abnormality information sheet that will be available for use at each survey. She appreciates everyone completing these in addition to the species data sheets already being used. Some of the biology department from VCU and herself will be performing a herp survey at Powhatan State Park. This is a new state park and has not yet developed a herp inventory. They will also have in attendance high school students from Powhatan High. This will allow the students to learn the basic methods of collecting, identifying, and recording data. The survey is currently scheduled for May 8, 2010.

Education Committee: Mike Clifford reports a lot of participation in educational activities over the past year. Presentations have been given to the American Camping Association, Nelson Garden Club, 4-H Club, Master Gardeners and Master Naturalists, and the Virginia Science Olympiad. There are many different ways to reach out to the public such as handouts and the internet. Mike presented a 2 hour live audio/visual interactive program for extension agents across the state. He would like to remind everyone to submit reports to him which show their educational efforts on behalf of the VHS. He strives to provide an annual report showing all efforts of education to our website; he feels the society's efforts are an important history to document for years to come. If interested in doing more and serving on this committee, he reminds all members to contact him, mjc4h@vt.edu or frogoller@hughes.net.

VHS Webmaster: John White reports the website is seeing about 200 new visitors per month and has seen the total hits per month increase to 2,000. He has recently completed the venomous snakes and classification of snakes sections. He hopes to soon complete Mike's edu-

Minutes of Fall 2009 Meeting

cation committee reports. Mike requests that anyone being contacted through the website for possible educational opportunites and inquiries to please cc (carbon copy) him in their reply.

Catesbeiana Editor: Paul Sattler reports that 150 copies were printed and about 140 were mailed out for a total of a little under \$320.00. This is down from previous years and hopes the treasurer stays on top of email reminders for renewals of membership and hopefully recruit new members. He currently has major articles for the next journal, but is always open to more material, so please continue to send him your field notes. He is using new software this upcoming journal and feels it is an easier format. It will allow the journal to become available in PDF and hopefully allow it to become searchable, which would then allow the journal to be cited in books as reference.

The meeting proceeded in a guided-open discussion with key points presented by Susan. She announced that the VHS Archives are now being kept with Paul Sattler at Liberty University. They are in need of organizing and cataloging and hopefully Paul will be able to do this over the next few months.

Richard Hoffman has discussed organizing a special honor to Frank Tobey for all of his work on the first Atlas of Amphibians and Reptiles of Virginia. However, Tobey did receive our first "Lifetime Achievement Award" for this work. Steve Roble will request Richard Hoffman write up a brief honor.

DGIF has offered to match our \$500 VHS Grant in Herpetology if research is geared towards a Wildlife Action Plan species. The website, <http://bewildvirginia.org/>, provides of list of the accepted species. It was suggested that we advertise this opportunity to professors throughout the state, in hopes that more student involvement will be initiated.

A professional request has been received by the Prince William County Park Authority regarding a new 230-acre unit to their park system

that will be in need of inventory. This presents a possible survey location for 2010 or 2011.

The suggestion was made for a VHS Virginia state license plate. The difficulty with pursuing this is the state requires 350 people to prepay in order for production to start. Further requirements and costs will continue to be researched.

The potential for allowing vendors at future meetings and symposiums as been presented. This will be revisited once the non-profit status has been achieved.

Proper conduct during surveys was reviewed regarding observing wildlife and not always catching the animals, replacing logs, decontaminating boots, checking traps every 24 hours, creating a standardized sheet/packet on the website or hand-out during the beginning of each survey.

VHS elections and appointments for the new term were presented by our nominating committee chair, Jason Gibson. Kory Steele has been elected President; Larry Mendoza Vice President; Emily Steele Treasurer of the Co-Secretary/Treasurer position; and Scott Duncan Secretary of the Co-Secretary/Treasurer position. Susan Watson was appointed Newsletter Editor; Paul Sattler Editor of *Catesbeiana*; and Jason Gibson Chair of the Nominating Committee. The meeting was brought to end by Kory Steele as he presented the goals as the new VHS President for the 2009-2011 term.

Emily C Steele
VHS Secretary

Treasurer's Report

Virginia Herpetological Society Treasurer's Report

Balance on Hand April 7, 2009 **\$6066.12**

Receipts:

May Dues:	\$ 16.00
July Dues:	\$ 80.00
September Dues:	\$ 310.00
Letonja Family Donation	\$ 200.00
Virginia Living Museum Donation	\$ 50.00
October Dues:	\$ 303.00
Live Auction:	\$ 303.00
Silent Auction:	\$ 145.00
Memberships from Nov-April	\$1,356.00
Poster sales	\$ 180.00
Virginia Living Museum Donation	\$ 50.00
Total Receipts	\$ 2993.00

Disbursements:

Catesbeiana 29(1)	\$ 559.44
Luray Zoo Donation	\$ 200.00
VHS Pens	\$ 310.00
VNHS Donation	\$ 100.00
Catesbeiana 29(2)	\$ 331.61
Fall Meeting Refreshments:	\$ 225.67
Presenter Lunches:	\$ 16.20
VHS Awards:	\$ 119.66
Books for Auction:	\$ 77.00
Student Poster Awards:	\$ 150.00
Student Paper Awards:	\$ 150.00
Speaker Honorarium:	\$ 200.00
IRS Non-profit Application	\$ 300.00
New Bank Account charges	\$ 29.83
Domain Name charges	\$ 31.54
State Corp. Comm. Registration fee	\$ 25.00
Luray Zoo Donation	\$ 100.00
2010 VHS Grants in Herpetology	\$ 500.00
Total Disbursements	\$ 3425.95

Balance on hand April 1, 2010 **\$5633.17**

Emily Steele (October 2009-Present) Pattie Crane (October 2007-2009)
VHS Treasurer

VHS Annual Spring Meeting and Survey

Mason Neck State Park is located in southern Fairfax County, about 20 miles from Washington, D.C. Access to the park is via U.S. 1, then five miles east on Route 242 (Gunston Road) to the park entrance. Children with supervision are welcome. Camping and cabins are available a short distance away at Pohick Bay Regional Park.

Schedule:

Friday, May 21

6pm - Business meeting followed by Slide Show of expected species, Survey planning and coordination. Shelter #2 Pohick Bay Regional Park.

Saturday, May 22

8:30 AM - Meet at Mason Neck State Park picnic area, across the road from the playground near the bathrooms. Organize into survey groups and conduct surveys.

12:30 PM - Regroup at Camp Douthat picnic area, eat lunch, and begin afternoon surveys.

5:00 PM - Meet back at starting picnic area to turn in survey reports and digital photos.

8:00 PM - Calling anuran surveys and road cruising (individually).

Sunday, May 23

8:30 AM - Meet at Mason Neck State Park picnic area, across the road from the playground near the bathrooms. Break into survey groups and conduct surveys.

12:00 PM - Regroup at Mason Neck picnic area, eat lunch, and turn in survey reports and digital photos.

For additional details and maps see <http://fwie.fw.vt.edu/VHS/>
For questions check with Kory Steele at colchicine@gmail.com

Field Notes

The field notes section of *Catesbeiana* provides a means for publishing natural history information on Virginia's amphibians and reptiles that does not lend itself to full-length articles. Observations on geographic distribution, ecology, reproduction, phenology, behavior, and other topics are welcomed. Field Notes will usually concern a single species. The format of the reports is: scientific name (followed by common name in parentheses), state abbreviation (VA), county and location, date(s) of observation, observer(s), data and observations. The name(s) and address(es) of the author(s) should appear one line below the report. Consult the editor if your information does not readily fit this format. All field notes must include a brief statement explaining the significance of the record (e.g., new county record) or observation (e.g., unusual or rarely observed behavior, extremely early or late seasonal record, abnormal coloration, etc.). Submissions that fail to include this information are subject to rejection. Relevant literature should be cited in the body of the text (see Field Notes in this issue for proper format). All submissions will be reviewed by the editor (and one other person if deemed necessary) and revised as needed pending consultation with the author(s). If the field note contains information on a new county (or state) record, verification is required in the form of a voucher specimen deposited in a permanent museum (e.g., Virginia Museum of Natural History) or a photograph (print, slide, or digital image) or recording (cassette tape or digital recording of anuran calls) deposited in the archives of the Virginia Herpetological Society. Photographs and recordings should be sent to the editor for verification and archiving purposes; the identity of voucher specimens must be confirmed by a museum curator or other qualified person. Include the specimen number if it has been catalogued. Prospective authors of distribution reports should consult Mitchell and Reay (1999. *Atlas of Amphibians and Reptiles in Virginia*), Mitchell (1994. *The Reptiles of Virginia*), and Tobey (1985. *Virginia's Amphibians and Reptiles: A Distributional Survey*) [both atlases are available on-line on the VHS website] as well as other recent literature to determine if they may have a new county record. New distribution records from large cities that formerly constituted counties (Chesapeake, Hampton, Newport News, Suffolk, and Virginia Beach) are acceptable, but records from smaller cities located within the boundaries of an adjoining county will only be published if the species has not been recorded from that county. Species identification for observational records (e.g., behavior) should be verified by a second person whenever possible.

PHOTOGRAPHS

High contrast photographs (prints, slides, or digital images) of amphibians and reptiles will be considered for publication if they are of good quality and are relevant to an accompanying article or field note. Digital images are preferred. Published photographs will be deposited in the VHS archives.

Paul Sattler
Department of Biology
Liberty University
1971 University Blvd.
Lynchburg, VA 24502